2007 ROSES Telecon

April 2, 2007

Questions and Answers:

Asked: I apologize if you have already covered this, but will these slides be available after the call?

Yes, they'll be posted on the Applies Sciences Web site. (http://science.hq.nasa.gov/earth-sun/applications/sol_current.html)

Asked: Concerning facilities and equipment…. In the Budget Justification-Narrative, the guidelines request that a description of required facilities and equipment be provided, including those existing that are required for the project. Why are the existing facilities included in the Budget Justification-Narrative, since they are not part of the budget? This appears to be redundant with a separate section titled "Facilities and Equipment" that also requires a description of the facilities and equipment as part of the overall proposal

Appendix A.20 of ROSES-2007 incorporates the 2007 Edition of the Guidebook for Proposers.

This question appears to be referring to the 2006 Edition of the Guidebook. This is a legitimate issue that has been rectified in the 2007 edition. Please refer to Section 2.3.10(a) of the 2007 edition to answer this question. Specifically, the description of any required facilities and equipment has been incorporated into the required budget narrative.

Asked: can you talk a little more on the focus of pre-evaluation and evaluation processes?

In many ways, as the proposal itself represents a significant push towards completing that evaluation phase, because in the evaluation you have to identify the decision support system as well as identify what the opportunities are for Earth science data to support and enhance that decision support system.

So in many ways, that evaluation process may not take a year for solicited projects since a lot of that effort has gone into the proposal itself.

Asked: Can you be a bit clearer on your definition of existing Decision Support Tools that are to be enhanced? Can a DSS just be a methodology in place to which we want to add an IT component?

Reading directly from the solicitation, generally -- the first page of solicitation in fact -- generally, decision support systems are interactive, computer-involved systems, and provide organizations with methods to retrieve and summarize information, analyze alternatives, and evaluate scenarios to gain insight on critical factors, sensitivities, and consequences of potential decisions. Types of decision support systems might include early warning systems, planning tools, forecasts, resource allocation tools. Again, this is a very broad definition because decision support systems are broad. They can be tools themselves, computer software, but they can also be decision support centers, if you will, where multiple decision support tools come together and inform the decision-makers on ways to go forward with management and policy issues.

For example, one project we have in the Homeland Security realm is to enhance the (IMAAC) Homeland Security Center with NASA Earth science research results.

Asked: Does the existing decision support "tool" need to be one specific system, software application, institutionalized program, etc. or can it be a suite tools and methodologies currently in use (common practices) by applications end users?

Again, using the definition from the solicitation, it indicates coverage of a wide range of tools/systems/processes that allow decision-makers to get their job done. The intent is not for NASA to tell another organization how to make its decision. We want to work with organizations that have a decision-making process or decision support systems that already exist. And we want to help them see if the NASA data or the Earth science data or the geo-science data can improve that decision.

And so it's not NASA's place to tell them how to go about making their decisions, but it is an opportunity for us to run their - or have them run their decision-making process both with and without the Earth science data to see if there's a marginal benefit to using Earth observations, models, other algorithms, et cetera.

Asked: Evaluation (p. A.20-8) - Please provide specific examples of existing DSS's that have an already-identified cohort or population of users that is already collecting some metric on decision-making. It is not clear what is considered a priori criteria for a good decision. if we are attempting to improve decision-making, we need to know what the program considers valid baseline studies.

As far as specific examples of projects that NASA is already working on to enhance decision support tools, those can be found on our Web site, both on the Applied Sciences Web site at the science.hq.nasa.gov portal, as well as on the AIWG Web site, that Web site was given on that slide here at the beginning of the presentation as well.

The AIWG web site: http://aiwg.gsfc.nasa.gov/

On that Web site, there's actually a lot of useful information including booklets detailing decision support tools that the program currently is working with. Certainly though, we want projects beyond that. This is just a catalog inventory of the current

projects we're working on, but it certainly is a start for people to look at that.

Asked: Can the end-user proposal member organization receive funding under the soliciation?

Absolutely, yes. That's sort of the intent. However, if they are international organizations, NASA cannot directly fund organizations that are non-US entities. If they're US entities, absolutely, any and all US entities can receive funding.

That said, financial contributions and other type of contributions from partners are also appreciated, and in some cases, a sign of their commitment to the effort being proposed. So, it's something to think about as well.

I think the philosophy is that NASA wants to meet its goals of extending the benefits of the NASA research to decision support not to be the funding agent for an operational agency decision support development effort.

So knowing that an end-user would be tying into say NOAA or EPA or another operational entity's activities, we would want to make sure that the operationalizing was supported financially by those partners with effort in the development, or continued development, and assimilation of NASA research results into their distinct decision - support system or one that is under development that they're committed to deploy.

For international activities, we're certainly interested in international activities as long as those international partners come with their own funding to support their part of the project. But NASA could support the US entities that are part of an international effort.

And we can certainly take in kind funding from organizations within the US such as State Department or USAID who can directly fund international entities.

Asked: Disaster management does not mention earthquakes. Does that mean the program is not interested in related proposals?

No. That doesn't exclude the earthquake proposals. And even when we're speaking about the AWIPS next generation, I'm looking at that as an all hazards type of decision support system. So there could be some ways that you can enhance that through AWIPS.

There's always ways to sustainable development in developing countries that earthquake techniques and applications can be applied. And of course there's always the opportunity for a very unique earthquake related proposals stand on its own with the decision support system that may be coming our way or working through the USGS. There are lots of opportunities there.

Asked: Does the Disaster Management request for AWIPS imply that those proposals will have priority over other DSSs? Please explain.

Well, it is a priority system that we're looking at and we want to focus on this year.

The National Weather Service is going through a major next generation upgrade or now they're calling it the AWIPS Evolution or (AWIPS 2). We want to be able to participate in that as fully as we can, so that is a priority decision support system where I would hope that we get some really good proposals and have some preference over that decision support system if we do get good proposals related to it. I know it's a new area but it's one that I want to focus on.

Asked: DSS proposal are requested thru a separate call as well as through the carbon science call. Can DSS proposal pertaining to carbon science be sent to the regular dss solicitation or should they be directed only thru the carbon science program?

If the proposal is to carbon science primarily and also linked to carbon management, I would recommend that it go to the carbon science solicitation.

If the proposal meets all the requirements for carbon management under this solicitation, under the decision solicitation, then it should come here. It's somewhat of a judgment call, but I would recommend reading the two solicitations carefully and basing the decisions on what's included in the solicitation.

Asked: The NASA applied sciences program is not intending to fund the creation or development of decision support systems. Is there a comprehensive list of decision support systems that may be in existence or in development by the end user organization by Jan 1 2007?

I don't think I can show them on the screen. But again, on the AIWG Web site listed on the second slide or third slide of the presentation, has a link to several booklets, booklets including detailing all of our satellite missions, all of the decision support we currently - or have worked with in the past, and as well as the - a booklet on the Earth system model that the program is currently involved with. So you could see lots of examples to that page.

AIWG Website: **http://aiwg.gsfc.nasa.gov/**

Asked: How would benefits for the private sector be evaluated?

Through the benchmark process we have, we're looking for both quantitative and qualitative results metrics of how the management/policy decisions from the specific DSS were enhanced from the baseline status - after they've been enhanced with NASA Earth science research results.

Certainly if we're talking about a private sector, this is, I mean just off the top of my head example, let's say, it was some energy company - energy management forecast decision support tool where every degree difference in the forecast temperature costs them x million dollars of money because of the amount of energy they had to buy off the grid, if NASA Earth science research results showed an increased accuracy of their temperature forecast model of x degrees Celsius that equates to x amount of money, that is certainly one way to benchmark how - what the benefit to the private sector is.

Just as an example off the top of my head, if that's what the question is asking. I would grant anybody else to jump in.

I would put that question back to the proposer from the review panel. I think it's up to the proposing team to tell us how they're going to evaluate enhancement of the decision support tool and how they're going to do that evaluation.

That's really something that the proposer should include in the proposal. Tell us how you're going to evaluate the benefits or the

enhancements to a decision support tool, whether it's private sector or public sector.

Asked: What are your contracting guidelines? PI/lead to carry sub-awards/contracts OR all funds disseminated from HQ?

All non-NASA awards go out through the NASA field centers, and where it is a sub-lot to another government agency, then it goes from the field center out to the other agency. If it goes - so in other words, all procurement activity will go to a field center with the exception of activities that are directly awarded to other NASA field centers.

If, as an example, a NASA space center is the procurement place for the solicitation and the Goddard Space Flight Center wins an award, we will directly fund Goddard Space Flight Center from headquarters. If an award is supposed to go to USDA because it's sub-award, then that will go not from headquarters but will go from the field center.

So for the most part, the non-government awards will go through the sub, go through the proposer to the PI. The government sub-awards that are not NASA will go to the field center and then the NASA sub-awards will go through headquarters.

Asked: We missed the NOI deadline. The proposal guidelines mention that submitting NOI, even late, is encouraged. Should we submit NOI?

If you've already completed it, yes, it's certainly helpful to the program managers here to get an idea or flavor of what proposals are coming in and so they can get a better handle on the communities, maturity in that area, and what decision support tools are out there.

So it is certainly helpful information for the program manager. But as we said in the solicitation, it is not required to be submitted. It has no effect on final disposition of proposals. The only hard deadline is May 25 for final proposals to be submitted.

Asked: Will ranking / funding preference be given to operational DSS over those currently in development?

The answer is no.

Asked: Should we expect feedback on NOIs?

No. There will be no feedback on the NOIs themselves.

Asked: is there a problem with enhancing a proprietary decision support system as long as enhancements due to NASA products can be documented and can be shown to be on a national scale?

Regulations pertaining to rights in data under funding instruments issued by NASA include the following:

- ***Contracts*: Refer to the basic Rights in Data clause at (Federal Acquisition Regulation) FAR 52.227-14 and associated coverage in FAR 27.402 through 27.404 with a focus on Limited Rights Data.**
- ***Grants and Cooperative Agreements with Commercial Organizations with cost sharing*: Refer to the Rights in Data provision in the NASA Grant and Cooperative Agreement Regulation at 14 CFR 1274.905 and associated material in 14 CFR 1274.208(l).**

- ***Grants and Cooperative Agreements with Educational Institutions and Nonprofit Organizations and Commercial Organizations without cost sharing*: Refer to the provision in 14 CFR 1260.30. Note the introductory guidance concerning proprietary information.**

Asked: Is there a preference for the DSS to be one of those named in following website: http://science.hq.nasa.gov/earth-sun/applications/

No. In fact we - there would almost a preference to not to expand the field of decision support systems we're looking to at hand. The ones posted on the Web site are great examples of our current and past projects, but we are looking to enhance new decision support systems from those in the past. But certainly no preference is given to those listed. We're - we are here to expand the horizon.

Asked: Are "contributions in kind" from partners (particularly the DSS end user) a criteria? Are contributions in kind from partners a criterion in the evaluation process?

We mentioned in the earlier slides in the table that was given, contributions for partner organizations are strongly encouraged. However, partner funding does not count towards funding level guidelines.

Asked: Is there a summary of the NASA research results that may be appropriate in one place?

Again, I point you to the AIWG Web site and the Applied Sciences program Web site which has lots of information, cataloguing and detailing models, satellite observation systems, decision support tools that

the program has worked with and developed over the past five years.

Asked: Should we consider missions that were highly recommended in the NRC Decadal Survey for launch as soon as possible (e.g. DESDynI)?

I think that's a difficult one to do because we haven't made any determination of how we're going to respond to the Decadal Survey and where the missions are going to go. We really got to go with the slate of what's planned I believe within the three-year period of the solicitation -- we can't stretch out too far because the results have to relate to an instrument that's going to be available by the end of the period.

And most of those at least are not public, but most of those missions even the ones NASA is considering, have no mission concept plans or anything yet. So it will be really difficult.

Yes, I agree with that; that was well put. Well, we need to be thinking about these future missions. I think that we want to get a little closer in the planning stage before we start trying to bring them for societal benefit beyond their intent.

Asked: Regarding drought related DSTs, there is an emphasis on drought prediction, as opposed to monitoring. Does that limit the appropriate DSTs to forecast models?

Ultimately it would be considered potentially under agriculture - or also, to that matter, under carbon or invasive species.

But the - no, the response to existing conditions is legitimate, a potentially legitimate proposal does not have to be -- (dealing) with droughts, does not have to be confined to drought prediction. This may be somewhere where we're caught between the different national application areas; it sounds like if it's in the relation to Ag or carbon, that you're willing to accept drought monitoring. In the water section, the water management program has a number of projects that are already looking drought monitoring. And so in our section solicitation, we specifically asked for proposals that are looking at drought forecasts and short-term predictions.

So I would say if the proposer is going to be looking at the drought aspects in the water management context, that we would prefer projects that are looking at short-term forecasts and predictions. But if the person is going to be looking more at carbon management activities, it sounds like you're interested in those projects.

Asked: What is NASA's feeling regarding additional HAB projects?

As the program manager, I'm very interested in additional harmful algal bloom proposals. I would say that we have had a significant effort looking at harmful algal blooms in the northern Gulf of Mexico area and we still have a project underway doing some of those activities.

Given that and given that we're trying to expand the portfolio both in terms of other issues in the gulf and in terms of other regions, I would encourage harmful algal bloom projects in other

regions than the gulf. But I'm certainly willing to accept another harmful algal bloom project in the gulf.

But all else being - if two projects come in and one has it in another region and one has in the gulf, I would probably prefer the one in another region simply because we have already existing HAB projects in the Gulf of Mexico that are going to be continuing for the next couple of years.

Asked: When you suggested NASA would help us find partners, would you also suggest NASA scientists who may be willing to be a collaborator?

We would not do that.

And I would like to add to that, when I said we would help you identify particular agencies or parts of agencies or organizations to work with. I don't think we're going to give anybody any names and phone numbers here. So to that extent we can help you - on the - going back to this question, on a research side, we can help you identify just as we can on the partner side groups or entities that are doing research in that area. We just cannot give individual names. So in a way, the answer is no.

Asked: How will these new tools be integrated into the existing decision support systems? Will NASA or the end host organization be responsible for this integration? Is the intent for the tools to become "operational"?

It is certainly the intent to transition to operations.

The intent of the three-year project is to work out the details to see what it would take to do that integration type of activity as well as to evaluate the value of the Earth science data in that decision support system or decision-making process.

So in that three years, both determining the value as well as determining what it would take to do the integration and then to do or to start the transition activities if the partner - if the data is a value to start the transition activities into that other agency, the idea, at the end of the three years, it should not be continuing to ask NASA for continuing funds to do that transition.

So to some degree we're trying to show the value, trying to do some of the integration activities. But at the end of the project there may be some integration activities that are still left to be done.

I'll just put it in terms of understanding that we're going to have a lot more good proposals and we're going to have money to fund them. So the stronger proposals are going to be ones that have a well-thought out, well-researched approach to getting the NASA or science research results extended into decision support.

And I think that the better that is thought out, the more likely it is that the peer review panel to find those strong folks, we're looking for a natural value that can be very high and more like - the more able the PI then to make a case that this is going to be successful, the more likely it is I think to be graded a priori.

In the panel review fully recognize that things will come up over the three years of doing a project where the team will learn what exactly needs to get done to do some of the integration activities.

So we recognize that not everything can be understood a priori and that things will occur during the project, that will affect both the transition and the integration, but that's partially what we're trying to fund.

But as Martin said, those teams that better understand the user community, better understand the partners, better understand the Earth science data and the potentials to determine value and the structured approach to do the integration will probably fare better in peer review.

Asked: Are proposals using data from the MODIS instrument only discouraged?

In the Section 2.2, we stated very clearly that we strongly encourage projects to use an array of our science research results, especially ones from recently launched NASA missions like IceSAT, Aura, GRACE, CloudSat, CALIPSO, as well as simulated products from upcoming missions.
In some individual program element areas, there is - that individual area, some of them I know discouraged - or downplayed (MODIS) usage.

Well, first of all, it's because our portfolio has a lot of projects that are looking at the use of (Landsat) and (MODIS). And so what

we're specifically trying to do is encourage people to be using observations from satellites in addition to those areas.

So, given our - given the portfolio -- and we are trying to expand beyond (Landsat) and (MODIS) -- we recognize the incredible value that those two systems have provided.

However, in many ways for water management we've demonstrated the real potential of them. If a project comes in that uses (MODIS) and (Landsat) in addition to a lot of the systems that you've provided, we would be ecstatic to read that.

If a project comes in that's limited to (Landsat) and (MODIS), I do not think it will fare well. We're trying to encourage people to springboard from those two and incorporate other systems in addition to those.

Asked: what is meant by "quantifiable" baseline performance mentioned in page A20-8 as a "must" thing to include? We are just confused as to what the expectation of NASA in terms of quantifying per-project decision making process?

This goes to the information related to performance measures. And also we're trying to get people to articulate in their proposals what the decision support system is.

And if we're imagining this project, at the beginning, a partner agency or user organization has an existing decision support system or existing decision support process. It seems like they should have some sense of what the performance of that system is

before the project gets started and that at the end of the three years when you've incorporated the Earth science data and you can run that same process again, you'll be able to see some marginal change from early state to the end state. And that marginal benefit could be attributed to the Earth science observations.

And so what we're trying to say is we would like the people to be establishing what that - what we're calling baseline which is at the beginning of the project, what is the performance of that decision support system or what is the quantifiable value of that decision-making prior to the project starting so that by the end of the project the proposal team will be able to make some assessment as to the change over the course of the life of the project.

And we're saying quantifiable because in previous solicitations we have received very qualitative sort of answers and responses from their review panels says that they would like to see more quantitative information. We are trying to get more quantitative in the value of the Earth science data.

So we're reflecting that in the proposal call to say that we want to get the - some quantifiable assessments of the initial state of the decision support process.

Asked: In the Aviation Section, does NWP refer to only finite-difference, full physics-type models, or is it generalized to include automated forecasting systems that are not full-physics models?

If the question is referring to forecasting systems such as AWIPS, that's not what the solicitation language is referring to. It is referring to the numerical weather prediction models both on a global all the way down to a regional scale that are inherent - that even though they are models -- are inherently used for decision support and forecasting.

Examples on a regional scale, short-term scales, would be the RUC model, all the way up to the (WRF) model, the weather research and forecasting model at NOAA, as well as the global forecasting system of NOAA. So those are some examples there.

Asked: Does Marty's answer re: procurement subawards mean that NASA Centers can submit proposals?

Certainly centers can submit proposals. The solicitation is open.

Asked: Federal agencies typically have an operational arm(s) & a R&D arm. Can a Federal employee working in the R&D arm of a Federal agency use grant monies to cover their salary?

Only NASA Civil Servant salaries can be covered through these monies. Other Federal agency civil service salaries cannot be covered.

Asked: Please clarify the prohibition of continuation proposals. Does this mean that the PI cannot currently be receiving DECISIONS funding? Knowing that PIs tend to work in their particular area of expertise, what is the criterion for determining if the proposal is "new".

I would say if you are funded under the - one of the current applied sciences program, whether it be the Decision 2004 solicitation, or the ROSES 2005 solicitation, that if you proposed to take a project that we fund under those solicitations and if you're proposing to merely extend that another couple of years with some more funding, that that would be non-responsive to the solicitation.

If you have existing funding through another solicitation that was not issued by the applied sciences program, then we encourage you to propose.

And, I think they are asking, if they have funding through a current applied sciences solicitation and they proposed a new project, even though their current one is still ongoing but they proposed a new project on a different tool, let's say, is that responsive?

The answer is absolutely.

Asked: What happens if NASA data is used effectively in another agencies operation, will that NASA data become operational? If not what happens to the data after 3 years?

As we said, we're evaluating the potential of NASA Earth science research results to enhance decision support. NASA data streams are not, if you want to talk about in a federal agency sense, operational, like NOAA satellites, they are research satellites. Many of our satellites, however, do have operational follow-ons

coming online in the next few years such as the NPP and NPOESS constellations.

We would hope that your project is so compelling and affordable and creates great results that the agencies will want to buy in to continuing the data operation. The transition from research operations is a big issue that's related to this. And we're hoping that there's a demonstration of these projects that we can be convincing that future systems incorporate these capabilities, NPP and NPOESS, for example, and that they do become operational.

I was going to add that it's possible that the data stream will continue - the NASA data stream will continue after the three-year term of the project in which case the data products would continue to be there for the operational user.

But as has been pointed out, there is an ongoing issue about how NASA will work with the community to transition the data sets that have demonstrated utility from experimental status into operational status.

And the information that we get from these successful proposals will -hopefully will feed into that process.

Asked: Are layers available via NASA's WorldWind sufficient to count as using earth-observing data? For example, if we were building a DSS mapping application on top of WorldWind?

WorldWind is a NASA funded visualization tool out of Ames which incorporates NASA data into the SERVIR projects. One of our partners, IEDT, developed a WorldWind based visualization tool called Surveyor VIZ which has been very helpful to that project.

I think you could think of WorldWind as a NASA product that's unique for use as NASA observation.

But I would kind of turn the question around a little bit. They - that while that would probably qualify to meet the minimum requirements of having NASA science research results as part of the project, I think it's important to point out to people on line that this is going to be a highly competitive process. And if you're having to reach to make a case for how this - that official to NASA by extending the kind of research results that are called out in the solicitation and showing what kind of benefit it will be for societal benefits, then you're probably going to be run up against a bunch of other well put together and high impact projects.

I'm not trying to be negative in any case, but be very encouraging of trying to really understand what NASA is trying to accomplish here, and that is to extend to the great extent possible the research result, dollars that the US taxpayers have paid to study the Earth from space and how we can extend that for societal benefit to the greatest impact that we can.

So, turning the question around, instead of saying, "Well, does this qualify?" say, "Well, you know, lots of things will qualify that will not get funded because there are going to be lots of really good proposals that use a lot of Earth science research results that have a very big impact in operations and have very good partnerships,

very good networks, how organizations are coming together," et cetera.

In the second part of that question, if I'm reading it correctly, it sounds like someone would be proposing to enhance the decision support system itself that's already using existing NASA data. An example there is tracking uncertainty. And I would think that's not something the applications program would be interested in. That sounds like it's improving the decision support system itself and not showing enhancement with a NASA product.

Asked: For 'Landsat' gap filler data such as from AWIFS does JACIE validation 'qualify' that data source for use?

Again I'd point out in 2.1, Section 2.1, of the solicitation. It says commercial remote sensing data that has been validated by the JACIE in support of NASA Earth science research grant should be considered a NASA Earth science research result.

However, the JACIE does more than just validate commercial data for NASA Earth science research activities. So, some of the work that JACIE had done - does would not qualify as NASA Earth science research results.

It is - I think that being very careful about what the language of solicitation says will help guide the proposers. It's got to be data that was validated for use in NASA research activity not just any (such as NGA) type of activity.

If the specific product that the question was asking about, if it was validated by JACIE in support of NASA Earth science research grant, would

be considered - it will be considered with the solicitation NASA Earth science research results, but not otherwise.

Asked: Are regional consortiums and state agencies considered as viable partnerships absent other federal agency involvement?

Yes, they are.

If it is one particular state agency, then I would say that that proposal should really consider how the transition would occur to a broader regional scope and/or that proposal should really make the case as to why that individual state in improving that state's decision support system is in such importance that it's of national importance. And I think it's, you know, in some cases, it's very easy to make that argument, but they would need to make the argument as to why that one state. I think it's a whole lot easier if you're working with regional organization, I think it's, you know, that involves the number of states.

I think it's easy to make the argument as to why helping that region would support the national interest. But I would say (helping) one individual state, the transition plan needs to really articulate how it would be - those benefits will be extended to other states and/or how that one individual state is of national importance to the rest of the nation.

And I would refer people again to the solicitation language itself on the wording about national impact and national scope. As we said, we'd support proposals of national impact including regional and international activities if they had US national importance. An example of such international organization and also those national and regional association consortiums that the question was asking about. For example, the Western Governor's Association comes to mind.

And to add to that, within the program, we fully recognize that even working with the national organization or a regional organization that a project has to get done in some local area. So we recognize that to actually conduct the project itself, needs to be done, you know, potentially on a smaller scale.

The reason why we're requiring sort of the national interest or the regional organization to be part of it is - so that once it's done at one smaller scale, it can be taken and extended to a broader area so that the nation can benefit more broadly than just one particular locale.

Asked: Can you define the term "end-user" i.e. if we partner with a federal agency, who supports state agencies, who support, ... where does the line end?

Well, you know, I think you could go on and on with that. We are supporting specific decision support systems for better management and policy decisions. The end-user is the owner of that operational decision support system that the NASA Earth science research results are enhancing.

Now what that operational agency goes on and does with that information comes from the DSS is really beyond the scope of the proposal. So they could be sitting at the state agency. They could be sitting with some stakeholder, and that's wonderful. But it's - as far as we're concerned, the end-user is the owner that decision support system that we're enhancing.

As a clarification, I hope this isn't getting down the weeds, but I agree with your definition except that it's not - the end-user is not necessarily the owner of the decision support system in terms of proprietary ownership, the user of that decision support system. The tool or whatever may actually be owned by a third party but it's being used by that - by the end-user.

And that's what we're talking about when we say commitment to the project from the end-user to work with NASA.

Asked: Will the panels be split by application area? How does one decide which is specific target? For example, drought monitoring benefits multiple areas.

Yes, panels are split by application areas. But you have the choice when you are submitting the proposal electronically through NSPIRES to pick up to three areas of national priority that your proposal targets from first priority to third.

Proposals that cross those multiple - that cross multiple national application areas can and will be reviewed by multiple panels to get a wide range of opinion.

I would just add that in defining which area you're - in which you're - in which area your proposal fits, you should be cognizant of what's being called out for those particular areas, and not just because something in your mind happens to relate to the broad topic, for example, an ecological forecasting does not necessarily mean it's what we're looking for in this call.

So, to be aware of what's being solicited under those different areas. And when you check a box, try to make sure that it does in fact cover something that is being asked for in this solicitation.

Also as program managers, it's part of our job to, as we read this proposal, that they come in to determine whether it needs to get read by more than one panel. And so we, you know, we often - we're often discussing the proposals as program managers and determining whether it needs - how many panels it should be read by.

Asked: If we add RS-based forecast models to an existing DSS, will this be acceptable? I doubt if this is taken as DSS development ?

As for modeling efforts - NASA modeling efforts are funded out of a different program in the Earth science division.

It is a bit of a fuzzy line as to what constitutes adopting a model that's been put together for persistent science research within NASA, adopting it to be able to be used for operation utilization, versus developing the algorithms that would have been funded - would have been funded under a modeling line item.

It's probably - that's probably worth talking to the program manager for that particular program if it was, for example, the disaster management issue to give Steve Ambrose a call and spend a couple of minutes talking to him about the details of it.

But, you know, in general, we don't fund the development of research models. We fund the utilization of models that were developed under the research program and adopting this for use in decision support.

Asked: Water Management and Air Quality specifically discourage proposals focusing on MODIS and Landsat. Does this apply to Agricultural Efficiency topic? Can use of AWiFS or MODIS and AWiFS for Ag Efficiency be proposed?

Yes, it can be proposed. The - I think this is just repeating something that was said before in that we're interested in proposals that cover the broad range of NASA capabilities. This is not - we're not precluding proposals that deal with (MODIS) data. But those proposals will, you know, will have to address some compelling issues in relation to proposal from the address systems that have not been used as thoroughly as (MODIS) in previous proposals.

I'd like to clarify looking at language and solicitation. For air quality, we simply said that we discourage it related to (MODIS) based aerosol or PM forecasting, partially because we already have six projects looking at that specific activity. So we haven't excluded (MODIS) overall for air quality proposals, we've merely done it for PM type of forecasting.

And then for the water management activity, specifically reading from the solicitation, it says that project proposing to use (MODIS) and (Landsat) must use other sensors and model products in addition to (MODIS) and (Landsat). So again, we haven't excluded it. We've just said, please use other sensors in addition to (MODIS) and (Landsat) for water related - water management project.

And I'd refer people back to the specific language in the solicitation. And whenever we say "in addition to," that should be read as, inclusive, not exclusive.

Asked: Is MODIS also discouraged for Coastal Management applications?

I would refer people back to I think 2.1 where we say, what are the projects that we're particularly looking for people, you know, what are the - some of the observation systems and model products.

But you're right, we are much more open to (MODIS) in the coastal area. But again, I would advise people to look at observation systems in addition to (MODIS) -- so (MODIS) and something else. So a project that's limited only to (MODIS) probably would not fare as well as the project that comes in with (MODIS) and another system involved.

Asked: Is a proposal responsive if the DSS influences very small regions, but is used very frequently by many individuals across the country. Only a few of these individuals would be partners on the proposed project.

A very small region -- that's kind of subjective. If it's a region important to the nation, we have always welcomed those proposals, such as Gulf of Mexico proposals, Great Lakes proposals in water management or coastal, things of that nature.

If - so, it would depend, I would suppose, if the very small region with a very high importance is not just to that local area but to the country for some type of management policy decisions or monitoring, if that - if you say data is very frequently accessed by

the individuals across the country, it would seem to imply that that was the case.

At the second part of the question where it says a lot users are potentially going to use that improvement, then I would say it's incumbent upon the proposing team to really address the transition from that small scale area to all those other users. And I would say that becomes a big part of that particular proposal, is the transition to show that it's going to get used by these other potential users around the country.

Asked: If the proposals use a range of NASA satellite observations, can they also include the use of data from European satellites (Envisat, MeTop) or other countries' satellites?

I wanted to make the point that if a proposal uses a range of NASA Earth observation data, that they could also propose to use other organizations data or observation systems including like European satellite data, you know, or European or Japanese or some other country's satellite data, especially in the spirit of the Group on Earth Observations. But at a minimum, it would have to involve some of the NASA Earth observation data.
